

REMARKS

By this Amendment, Applicant has amended claim 57. No new matter has been added. Claims 1-69 and 71-74 are present in the application. Of those claims, claims 16-56 have been previously withdrawn from consideration on the merits as being directed to non-elected subject matter. Thus, claims 1-15, 57-69, and 71-74 are pending on the merits. Applicants respectfully request reconsideration and withdrawal of the claim rejections included in the Office Action of October 30, 2008 ('the Office Action'), for at least the reasons outlined herein.

I. Claim Rejection under 35 U.S.C. § 112, Second Paragraph

In the Office Action, claims 57-69 and 71-74¹ were rejected under 35 U.S.C. § 112, second paragraph. Office Action at 2. In particular, the rejection statement asserts that in claim 57, "it is unclear from the Specification and the claims whether the % solid refers to[] a weight percentage or a volume percentage." Id.

Although Applicant respectfully submits that a person having ordinary skill in the art would have understood that the "% solid[s]" recited in independent claim 57 refers to a weight percentage, Applicants have amended claim 57 to recite, in pertinent part, "wherein said pigment composition has a solids concentration ranging from 40% to 65% solids by weight." Support for this amendment may be found, for example, at least at paragraphs [045], [056], and [0106]. In particular, those paragraphs disclose examples

¹ Although the rejection statement lists claims "57-74" as being rejected under 35 U.S.C. § 112, second paragraph, Applicant respectfully notes that claim 70 was canceled in the Amendment filed July 29, 2008. Thus, pending claims 57-69 and 71-74 have been rejected.

of solids concentrations for a pigment composition, and further, some examples expressly refer to those solids concentrations in "weight %." None of those examples refers to volume percentage.

Accordingly, Applicant respectfully submits that claim 57 fully complies with 35 U.S.C. § 112, second paragraph. Further, because a person having ordinary skill in the art would have understood that the solids concentration recited in independent claim 57 (prior to the amendment made herein) is a "weight percentage," Applicant respectfully submits that the amendment to add "by weight" to claim 57 does not narrow the scope of claim 57, and claim 57 should be interpreted accordingly. For at least the above-outlined reasons, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 57-69 and 71-74 under § 112, second paragraph.

II. Claim Rejection under 35 U.S.C. § 103(a) based on Brown

Claims 1-15, 57-69, and 71-74² have been rejected under 35 U.S.C. § 103(a) based on U.S. Patent No. 5,653,795 to Brown ("Brown"). Office Action at 3. Claims 1 and 57 are the only independent claims included in that claim rejection, and Applicant respectfully traverses the rejection of independent claims 1 and 57 under § 103(a) based on Brown because Brown fails to disclose or render obvious all of the subject matter recited in independent claims 1 and 57. See M.P.E.P. § 2141 (III) (8th ed. rev. 7 July 2008).

² Claim 70 has been canceled. See supra note 1.

A. Independent Claim 1

Applicant's independent claim 1 is directed to a pigment composition including, among other recitations, "at least one anionic dispersant present in an amount sufficient to overdisperse the at least one calcium carbonate . . ." Brown fails to disclose or render obvious at least this subject matter recited in independent claim 1.

The rejection statement concedes that "Brown et al. does not state that the 'anionic dispersant present in an amount sufficient to overdisperse the at least one calcium carbonate' as in claim 1 . . ." Office Action at 6. The rejection statement asserts, however, that "[i]t would have been obvious . . . to optimize the concentration of the calcium carbonate in the pigment composition given that the rheology of the pigment concentration can be controlled by varying the amount of the dispersants and the ease of coating the pigment composition is dependent on the rheology of the composition." Id. Applicant respectfully disagrees with these assertions and traverses the rejection for at least the reasons outlined below.

Under 35 U.S.C. § 103(a), several basic factual inquiries must be made in order to evaluate whether a patent claim is obvious. According to the M.P.E.P., obviousness is a question of law based on these factual inquiries. § 2141(I) (citing KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 82 U.S.P.Q.2d (BNA) 1385 (2007), and relying on the framework established by Graham v. John Deere Co., 383 U.S. 1, 17, 148 U.S.P.Q. (BNA) 459, 467 (1966)). In particular, the Graham factual inquiries create a four-part framework for evaluating whether a patent claim is obvious. Graham, 383 U.S. at 17. Those factual inquiries are as follows:

- (A) Determining the scope and contents of the prior art;

- (B) Ascertaining the differences between the prior art and the claims at issue;
- (C) Resolving the level of ordinary skill in the pertinent art; and
- (D) Evaluating evidence of secondary considerations.

Id. The M.P.E.P. advises that the question of obviousness must be resolved on the basis of these factual determinations. M.P.E.P. § 2141(I).

The M.P.E.P. also provides guidelines for making these factual determinations. For example, the M.P.E.P. cautions that in order to avoid impermissible hindsight reasoning, these factual determinations must be made with respect to "the time the invention was made." § 2141.01(III). Moreover, the M.P.E.P. cautions that when "determining the differences between the prior art and the claims, the question [of obviousness] is not whether the differences themselves would have been obvious, but [rather, it is] whether the claimed invention as a whole would have been obvious." § 2141.02(I). Indeed, when considering the prior art, "[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention." § 2143.03(VI) (second emphasis added).

Once the Graham factual inquiries have been resolved, it must be determined whether a claim is *prima facie* obvious. § 2141(III). Following the guidance of the above-outlined framework, the M.P.E.P. cautions that in order to establish a *prima facie* case of obviousness, "the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made." § 2142. Further, "the examiner must then make a determination whether the claimed invention 'as a whole' would have been obvious at that time to that person," and further, that "[k]nowledge of applicant's disclosure must be

put aside in reaching this determination" because "impermissible hindsight must be avoided and a legal conclusion must be reached on the basis of the facts gleaned from the prior art"; not on the basis of applicant's disclosure. Id.

Based on this guidance, the M.P.E.P. advises "[i]f a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious." § 2143.01(VI). In other words, if the prior art teaches away from a proposed modification, then the prior art does not render a claim *prima facie* obvious.

Applicants respectfully submit that Brown fails to disclose all of the subject matter recited in independent claim 1, and further, that the rejection statement has failed to articulate in a legally sufficient manner why the differences between Brown and independent claim 1 would have been purportedly obvious to one of ordinary skill in the art. As acknowledged in the rejection statement, Brown does not disclose "at least one anionic dispersant present in an amount sufficient to overdisperse the at least one calcium carbonate." Office Action at 6. Further, the rejection statement's obviousness assertion is wholly unsupported by Brown and fails to identify any other legally sufficient source for support.

Exemplary embodiments disclosed in the present application teach that use of an anionic dispersing agent in an amount large enough to overdisperse the calcium carbonate beyond the point of minimal viscosity surprisingly leads to improved printing properties on paper, which has been coated with such a composition. See, e.g., paragraphs [034]-[035]. For example, as shown in Example 3, there is a clear

improvement in print quality when a paper coating is prepared using an overdispersed calcium carbonate slurry. Paragraphs [091]-[092]. In particular, an anionic polymer was added in an amount more than four times larger than needed for minimum rheology. Id. The analysis of the pigment coatings shows that this exemplary technique of overdispersing improved both the high print density and visual print quality. Id. In particular, the table on page 24 shows that the print quality for one of the samples of the presented exemplary embodiment (2.5% maleic acrylic copolymer) was visually assessed as good. In comparison, the samples having only the minimum rheology dose (0.5% maleic acrylic copolymer) were assessed as having slight bleeding or moderate to bad bleeding.

The rejection statement asserts in an unsupported manner that "it would have been obvious . . . to optimize the concentration of the calcium carbonate in the pigment composition given that the rheology of the pigment concentration can be controlled by varying the amount of the dispersants and the ease of coating the pigment composition is dependent on the rheology of the composition." Office Action at 6.

Applicant respectfully disagrees with this unsupported obviousness assertion. Brown does not mention or implicitly disclose any subject matter related to anionic dispersants present in an amount sufficient to overdisperse calcium carbonate. Thus, it would not have been obvious to a skilled artisan to supply more anionic dispersant in an amount greater than that known to provide minimum viscosity (i.e., an amount less than that sufficient to overdisperse). Thus, the rejection statement's unsupported assertion about optimizing the concentration of the calcium carbonate based on rheology and dispersants is contrary to Brown and the expectations of a skilled artisan. Indeed,

absent Applicant's own disclosure and hindsight reasoning, a skilled artisan would not anticipate that an amount sufficient to overdisperse would have any beneficial effect, and further, a skilled artisan would thus believe that such an amount would unnecessarily add cost to the composition without providing any benefit.

As a result, Applicant respectfully submits that contrary to the guidance of the M.P.E.P., the rejection statement has improperly relied on Applicant's own disclosure and hindsight reasoning in order to reconstruct the subject matter recited in Applicant's independent claim 1. The Brown reference itself simply does not support the rejection statement's obviousness assertion, and further, the rejection statement has failed to supply any legally sufficient alternative source to support its assertion.

For at least the above reasons, the rejection statement has failed to articulate why the acknowledged differences between Brown and the subject matter recited in independent claim 1 would have somehow been obvious to a person having ordinary skill in the art. Thus, the rejection statement has failed to set forth a *prima facie* case of obviousness with respect to Applicant's independent claim 1. Therefore, Applicant respectfully requests reconsideration and withdrawal of the § 103(a) rejection of independent claim 1 based on Brown.

B. Independent Claim 57

Brown also fails to disclose or render obvious all of the subject matter recited in Applicant's amended independent claim 57. Indeed, Brown teaches away from the subject matter recited in independent claim 57. Therefore, the rejection of independent claim 57 under 35 U.S.C. § 103(a) based on Brown should be withdrawn.

According to the M.P.E.P., “[a] prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.” § 2143.03(VI) (second emphasis added). Further, the M.P.E.P. advises “[i]f a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” § 2143.01(VI). In other words, if the prior art teaches away from a proposed modification, then the prior art does not render a claim *prima facie* obvious.

Applicant respectfully submits that independent claim 57 is not *prima facie* obvious based on Brown at least because Brown teaches away from subject matter recited in independent claim 57. Applicant's independent claim 57 is directed to a pigment composition, “wherein said pigment composition has a solids concentration ranging from 40% to 65% solids by weight.” The rejection statement concedes that Brown “do[es] not state . . . that the ‘pigment composition has a solids concentration ranging from 40% to 65%’ as in claim 57.” Office Action at 6. The rejection statement apparently (although not expressed clearly) believes that this subject matter admittedly not disclosed in Brown is somehow purportedly obvious.

Applicant respectfully submits that not only does Brown not disclose all of the subject matter recited in Applicant's independent claim 57, Brown teaches away from the subject matter recited, thus rendering the Brown reference evidence of the non-obviousness of the recited subject matter. Although Brown discloses the use of an anionic dispersing agent, Brown fails to disclose a pigment composition having a solids concentration ranging from 40% to 65% solids by weight,” as recited in Applicant's

independent claim 57. Indeed, according to Brown's disclosure, in contrast with the subject matter recited in Applicant's independent claim 57, slurries having a lower solids concentration are preferred. In particular, Brown discloses a slurry composition that is "diluted to have a solids range of from about 1 to about 30 percent by weight, a solids range of from about 1 to about 20 percent by weight is preferred," and further, that "[b]est results are achieved by diluting the aqueous mineral slurry from about 1 to no more than 10 percent solids by weight to facilitate selective aggregation . . ." Col. 8, II. 30-35 (emphasis added). Thus, Brown teaches a maximum percentage of solids of about 30%, and that "best results" are achieved with "no more than 10%." As a result, a person having ordinary skill in the art would understand Brown to be teaching that lower percentages of solids content are preferred. Thus, Brown teaches away from the rejection statement's implied and unsupported assertion that it would have been obvious to modify Brown's composition by increasing the solids percentage, in direct contradiction to Brown's express teachings. Indeed, Brown provides strong evidence that "a solids concentration ranging from 40% to 65% solids by weight" is non-obvious.

For at least the above-outlined reasons, Applicant's independent claim 57 is not *prima facie* obvious based on Brown. In particular, Brown teaches away from the subject matter recited in Applicant's independent claim 57. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of independent claim 57 under § 103(a) based on Brown.

III. Conclusion

For at least the reasons set forth above, independent claims 1 and 57 should be allowable. Dependent claims 2-15, 58-69, and 71-74 each depend from a corresponding one of those allowable independent claims. Consequently, those dependent claims should be allowable for at least the same reasons as the corresponding allowable independent claim. Accordingly, Applicant respectfully requests reconsideration of this application, withdrawal of the claim rejections, and allowance of all of pending claims 1-15, 57-69, and 71-74.

If the Examiner believes that a telephone conversation might advance prosecution, the Examiner is cordially invited to call Applicant's undersigned attorney at (404) 653-6561.

Applicant respectfully submits that the Office Action contains a number of assertions concerning the related art and the claims. Regardless of whether those assertions are addressed specifically herein, Applicant respectfully declines to automatically subscribe to them.

Please grant any extensions of time required to enter this Amendment and charge any additional required fees to our Deposit Account 6-0916.

Respectfully submitted,

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Dated: January 28, 2009

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